



# AGENDA REPORT

**TO:** Edward D. Reiskin  
City Administrator

**FROM:** G. Harold Duffey  
Director, Oakland Public  
Works

**SUBJECT:** Stormwater Trash Load Reduction  
Compliance Update

**DATE:** January 24, 2022

City Administrator Approval

Date:

Feb 7, 2022

## **RECOMMENDATION**

**Staff Recommends That The City Council Receive An Informational Report On The Status Of The City's Compliance With The Municipal Regional Stormwater Permit (MRP) Trash Reduction Requirements And Anticipated Changes To Those Requirements In The Upcoming Reissuance Of The MRP.**

## **EXECUTIVE SUMMARY**

This report provides: 1) a compliance update on the progress by the City of Oakland (City) toward meeting trash reduction requirements in the Municipal Regional Stormwater Permit (MRP) under the National Pollutant Discharge Elimination System (NPDES), issued and enforced by the San Francisco Bay Regional Water Quality Control Board (Water Board); and 2) a description of proposed changes to trash reduction regulations in the Tentative Order for the reissuance of the MRP (MRP 3.0) and their potential effects on the City.

Through significant financial investment in trash capture, trash management, and litter prevention actions, the City achieved 100 percent compliance under current MRP requirements. The MRP 3.0 Tentative Order proposes new requirements that remove several categories of compliance credit and sets a new compliance deadline of July 1, 2025. To meet the MRP 3.0 definition of 100 percent trash load reduction compliance, the City would need to install many additional full trash capture devices, which would be technically challenging and costly to implement and maintain. The City has requested the Water Board to revise MRP 3.0 to include only feasible and achievable mandates to support meaningful progress toward bettering the City's environment.

## **BACKGROUND / LEGISLATIVE HISTORY**

On May 4, 2021, Oakland Public Works (OPW) provided the Public Works Committee (PWC) with an informational memorandum regarding the status of compliance with the trash load reduction requirements in the MRP. This report was subsequent to previous informational reports presented on February 25, 2020, February 19, 2019, and April 25 and October 24, 2017.

Public Works Committee  
February 22, 2022

The current report responds to the PWC's request to provide an annual update on the City's comprehensive trash reduction strategy, including programs and activities, compliance status, and next steps to meet future requirements.

In 1987, under amendments to the 1972 Clean Water Act, the Environmental Protection Agency imposed regulations that mandate control and reduction of pollutants in stormwater runoff through the NPDES permitting program. In the Bay Area, under the authority of the Porter-Cologne Water Quality Control Act, the Water Board issues and enforces municipal stormwater NPDES permits.

The City is regulated by the second iteration of the Municipal Regional Stormwater NPDES Permit (MRP 2.0), which was approved by the Water Board in 2015 and applies to all municipalities throughout Alameda, San Mateo, Santa Clara, and Contra Costa counties, as well as the cities of Fairfield, Suisun City, and Vallejo. The MRP mandates specific actions, implementation levels, and reporting requirements. Failure by municipalities to comply with the permit requirements may result in significant enforcement action by the Water Board or legal actions by third-party entities.

The MRP 3.0 Tentative Order was released in September 2021, and the City provided oral and written comments requesting more cost-effective and flexible requirements. Water Board staff are reviewing comments and will request a revised Tentative Order approval by their Board in spring 2022. If adopted, the new permit is anticipated to become effective July 1, 2022.

## **ANALYSIS AND POLICY ALTERNATIVES**

This section provides a compliance update on the City's progress to meet current MRP trash load reduction requirements, including a description of all compliance trash reduction programs. It also describes expected changes to trash reduction requirements and their anticipated impacts on the City from the reissuance of the MRP (MRP 3.0). Compliance with MRP stormwater requirements to protect Oakland's creeks and the San Francisco Bay, and negotiation with the Water Board to encourage feasible and achievable mandates described in this report support the City's goals of building **vibrant, sustainable infrastructure** and being a **responsive, trustworthy government**, respectively.

### ***MRP 2.0 Trash Load Reduction Compliance Status***

Under MRP 2.0, Provision C.10, "Trash Load Reduction," the City is mandated to reduce trash and litter in its storm drain system and waterways that flow to the San Francisco Bay (Bay). Compliance benchmarks for this mandate are based on several formulas related to a baseline trash generation rate developed in 2009 that includes actual volumes removed and other actions that provide credits and offsets. "Trash generation" is a term used to describe the level of trash deposited onto land areas that could potentially be transported to the storm drain system and waterways. The rate was calculated using a formula that includes land use classifications, median household income, and observed trash levels. The MRP formulas require the identification of four types of trash generation areas: Very-High, High, Moderate, and Low (see **Attachment A** – Baseline Trash Generation and Full Trash Capture Systems Map).

As of July 2021, the City has met and is maintaining the MRP 2.0 compliance mandate to reduce trash loads by 100 percent of the 2009 baseline levels. This was achieved through numerous efforts, including the installation of underground full trash capture systems in the City’s storm drain system, above-ground efforts, including multiple city initiatives such as the Excess Litter Fee Program, the Business Improvement Districts, street sweeping programs, and clean-up of illegal dumping sites and homeless encampments, and volunteer programs and events to remove litter in the streets and other areas before it enters inlets and waterways, as further described below.

**Trash Reduction Programs**

Under MRP 2.0, trash reduction credits are taken in five established Trash Load Reduction Action categories:

1. Full Trash Capture Systems
2. Creek & Shoreline Cleanups
3. Source Control Actions
4. Direct Trash Discharge Control Program
5. Other Control Measures

The following **Table 1** shows a summary of Trash Load Reduction Action categories and corresponding reduction credits by Fiscal Year (FY): FY 2017/18, FY 2018/19, FY 2019/20, and FY 2020/21.

**Table 1: Trash Reduction Credit Summary**

Trash Load Reduction Action	FY 17/18	FY 18/19	FY 19/20	FY 20/21
1) Full Trash Capture Systems*	12.4%	12.4%	11.9%	11.6%
2) Creek & Shoreline Cleanups	10.0%	10.0%	10.0%	10.0%
3) Source Control Actions**	10.0%	10.0%	10.0%	10.0%
4) Direct Trash Discharge Program	0%	15%	15.0%	15.0%
5) Other Control Measures***	46.2%	48.4%	49.4%	56.8%
<b>TOTAL</b>	<b>78.6%</b>	<b>95.8%</b>	<b>96.3%</b>	<b>&gt;100%</b>

\* The percent trash reduction from full trash capture systems changed from 12.4% (FY 18/19) to 11.9% (FY 19/20) due to the reassessment of areas addressed by connector pipe screens associated with the East Bay Bus Rapid Transit Project.

\*\* This category includes plastic bag and polystyrene product bans.

\*\*\* This category includes Business Improvement Districts, Excess Litter Fee activities, street sweeping, illegal dumping and homeless encampment clean-up, Adopt-a-Spot, and other on-land clean-up efforts.

1. Full Trash Capture Systems

Full trash capture (FTC) systems are devices installed in storm drain infrastructure that collect trash before it enters nearby waterways. The two main types of FTC devices are hydrodynamic separators, which are large underground units that capture trash as stormwater flows through the storm drain system, and connector pipe screens, which are screens installed in a storm drain inlet that trap trash and prevent it from transporting through the storm drain system. Green stormwater infrastructure (GSI) facilities, such as rain gardens, can also be designed as

approved FTC systems. Roadway and other stormwater runoff is directed to GSI facilities where trash and other pollutants are removed from the storm drain system allowing clean runoff to filter back into the system before entering waterways.

FTC devices are an effective method for preventing trash from entering waterways, and they ensure full trash reduction credit for the area treated; however, they are expensive to install and maintain. Also, because they are underground solutions, they do not provide cleaner streets and neighborhoods, and therefore do not necessarily enhance the quality of life for residents. GSI FTC facilities are the exception because they provide landscaping and beautification in addition to treating stormwater.

Since FY 2015/16, over 110 new full trash capture storm drain inlet screens and one (1) hydrodynamic separator have been installed and, in combination with existing FTC devices installed prior to FY 2015/16, treat over 1,200 acres of high and very-high trash generating areas resulting in a total of 11.6 percent reduction credit. The screens are primarily installed in conjunction with capital improvement and transportation projects (see **Attachment A** – Baseline Trash Generation and Full Trash Capture Systems Map).

## 2. Creek and Shoreline Cleanups

The City receives the maximum available trash load reduction credit of 10 percent in this category through the implementation of numerous trash removal/cleanup events, such as the annual Earth Day and Creek to Bay Day events, at Lake Merritt, local creeks, and on the Bay shorelines. Over 512,000 gallons of trash were removed from local waterways during FY 2020/21, which exceeded the volume needed for the City to receive the 10 percent trash load reduction.

## 3. Source Control Actions

For the past five years, the City has received an additional 2 percent, for a total of 10 percent source reduction credit, for the Alameda countywide plastic bag ban and the City of Oakland polystyrene food service ware ban. The additional 2 percent is for the expansion of the countywide single-use plastic bag ban to include all retail facilities. The plastic bag ban is implemented through the Alameda County Waste Management Authority.

## 4. Direct Trash Discharge Control Program

In FY 2020/21, the City received the maximum available trash load reduction credit of 15 percent for the implementation of a Direct Trash Discharge Control Program. This program, approved by the Water Board in April 2019, allows the City to receive trash reduction credit for its activities and programs that reduce the impacts of trash from homeless encampments and illegal dumping into local creeks and the storm drain system within 500-feet of a waterway. Last fiscal year, the City removed more than 23 million gallons of trash from streets, parks, and public rights-of-way through these programs, over 4 million gallons of which was within 500-feet of a waterway and hence eligible for credit. To receive the full 15 percent trash reduction credit available in this category, the City must remove a minimum of 735,000 gallons within 500-feet of a waterway. The Direct Trash Discharge Control Program allows the City to leverage the

enormous efforts already devoted to illegal dumping and homeless encampment litter abatement to receive valuable trash reduction credit.

## 5. Other Control Measures

In FY 2020/21, the City received an additional 7.4 percent in trash reduction credit for other control measures for a total of 56.8 percent. This category measures the effectiveness of many of the City's above-ground trash reduction efforts that include:

- **Street Sweeping:** Continuing the City's street sweeping program is the most widespread trash control measure that targets much of its efforts in High and Very-High trash producing areas, including downtown, business districts, and major arterials, with three (3) or more sweeping events per week. The City has posted signs on all routes, has a rigorous enforcement program, and spends more than \$6.5 million dollars on implementation annually.
- **Adopt-a-Spot Program:** The City implements an award-winning Adopt-a-Spot program to support individuals, neighborhood groups, civic organizations, and businesses in the ongoing cleaning and greening of parks, creeks, shorelines, streets, trails, and other public spaces. In FY 2020/21, citywide, volunteers contributed over 40,000 on-land clean-up hours at adopted spots and parks.
- **Adopt-a-Drain Program:** The Adopt-a-Drain program enhances the City staff's efforts to clean up storm drains throughout the city. More than 1,500 of the City's estimated 13,600 storm drains have been adopted since the program began.
- **Excess Litter Fee (ELF) Program:** The City's ELF Program is implemented near fast-food businesses, convenience markets, gasoline station markets, and liquor stores. ELF fees collected provide funds for a contracted crew to clean up the trash around businesses that sell/provide large amounts of disposable materials to customers. The contracted crew services more than 850 ELF businesses sites throughout the city and focuses on known locations of high street litter and illegal dumping.
- **Business Improvement Districts (BIDs):** There are 11 BIDs in neighborhood commercial areas throughout the city that encompass a total area of over 900 acres. These organizations hire full-time staff to remove litter and dedicate funding to maintain trash containers, manage the number and capacity of trash containers needed, install and maintain cigarette butt receptacles, and install public anti-litter signage.
- **Enhanced Facility Inspection Program:** The City conducts an enhanced facility inspection program of more than 500 facilities, including identifying overflowing trash cans, trash conditions in the right-of-way, and compliance with the City's Polystyrene Foam Food Service Ware Ordinance.
- **Oaktown PROUD (Prevent and Report Oakland's Unlawful Dumping):** The City implements a multifaceted education and outreach campaign designed to reduce illegal dumping that has disproportionately harmed black and brown communities. This program includes community involvement, education, eradication, enforcement, and

services designed to help residents dispose of bulky trash and make a difference in their neighborhoods.

To justify and calculate trash reduction credit in the “Other Control Measures” category, the City is required to conduct visual assessments of street segments using a Water Board-approved protocol developed by permittees in 2015 known as On-land Visual Trash Assessments (OVTAs). The protocol provides qualitative estimates of the amount of trash on the streets that may be transported into the storm drain system as observed through field assessments along a designated percentage of randomly selected stretches of street in each Trash Management Area. A category of trash condition, from low to very high, is assigned to the area based on trash count and visual condition as recorded through photographs. The assigned trash condition determines if the area qualifies for trash reduction credit using the standardized formula in the protocol. The past five years of OVTAs have demonstrated that in some areas of the City, trash reduction activities such as enhanced trash removal by the BIDs, Adopt-a-Spot volunteer efforts, and the three times or more a week of street sweeping in commercial areas and downtown have reduced the amount of trash found from Very-High to Moderate trash levels.

More information concerning the City’s trash load reduction program, including purpose, permit requirements, and compliance status, is available in the City of Oakland Annual Report to the Water Board: [https://cao-94612.s3.amazonaws.com/documents/Oakland\\_2020-21\\_MRP\\_AR\\_Final-092921.pdf](https://cao-94612.s3.amazonaws.com/documents/Oakland_2020-21_MRP_AR_Final-092921.pdf).

### ***Ongoing and Planned Compliance Actions***

#### ***Installation of Full Trash Capture Systems***

The City will leverage existing bond funding, transportation funding, existing capital projects, grants, and private development projects to install FTC systems. The City Council has provided direction to staff on several occasions to look for opportunities for FTC implementation.

- On June 12, 2017, City Council approved Resolution No. 86773 C.M.S., for the identification of Capital Improvement Projects funded by the General Obligation Bond (Measure KK), including the adoption of a Trash Capture Transportation Map that showed transportation project locations in high trash generation areas to ensure that those projects incorporate FTC as feasible.
- On June 12, 2018, City Council approved Resolution No. 87238 C.M.S., authorizing the City to enter a Cooperative Implementation Agreement with Caltrans for an FTC project in the Ettie Street watershed. Caltrans was not able to proceed with the agreement at that time, but the terms of the Cooperative Implementation Agreement have now been finalized, and Caltrans will provide \$2.9 million for that project that is estimated for construction in 2023.
- On November 14, 2019, City Council approved Resolution No. 87919 C.M.S., authorizing the submission of an Ordinance on the March 3, 2020, Statewide Primary Election ballot for a 20-year parcel tax to raise revenues necessary to maintain, protect and improve parks and recreational facilities and services, to provide homeless support services, and to improve water quality. Oakland voters passed Measure Q, which

provides \$21 million annually with approximately \$1 million for stormwater system improvement and trash reduction efforts, including FTC installation.

To support Council's direction on FTC, staff has developed an internal Standard Operating Procedure (SOP) requiring the inclusion of FTC in capital improvement and transportation projects in High and Very-High trash generating areas. The SOP also includes FTC standard specifications and standard details to facilitate the installation of FTC with City contractors. In addition, the City has completed a prioritization study to identify locations for FTC that will maximize cost-effective and trash reduction credits.

The City currently has plans to implement the following FTC projects:

- Approximately 30 connector pipe screens units as part of the Active Transportation Program 20th Street Project, Highway Safety Improvement Program Cycle 7 Telegraph Avenue Improvement Project, and Fruitvale Alive Gap Closure Project;
- Approximately 40 connector pipe screens units as part of the Sewer Rehabilitation Program;
- Approximately 1,200 connector pipe screens units in Very-High, High, and Moderate trash generating areas receiving paving rehabilitation as part of the 3-Year Paving Program; and
- 1 hydrodynamic separator in the Ettie Street watershed in collaboration with Caltrans.

#### *Implementation and Expansion of Other Control Measures*

The City will continue to implement the numerous trash control actions already underway to remove litter in streets, parks, and other publicly-owned spaces before it enters inlets and waterways, including volunteer programs and events, the ELF Program, BIDs, street sweeping programs, and clean-up of illegal dumping sites and homeless encampments. Moving forward, new actions the City will explore and/or undertake include, but are not limited to:

- Examine the fee structure, fee amount, and definition of ELF-eligible businesses.
- Work with stakeholders to encourage the formation of BIDs in other areas (i.e., Chinatown, East Lake/Little Saigon Area, Piedmont Avenue, Coliseum Area, Oakland Airport Area, and Embarcadero Cove Area).
- Explore the feasibility of expanding disposable food service ware limitations.
- Consider recommendations and findings from a citywide street sweeping evaluation on how the City can improve trash levels on streets, reduce redundancies in trash control measures, and improve the cost-efficiency of the City's Street Sweeping Program.

#### ***Municipal Regional Permit 3.0 Tentative Order***

The Water Board updates and reissues the MRP approximately every five years to increase stormwater protection requirements. The newest reissuance of the permit will represent the third iteration of the MRP. While the goal of the MRP 3.0 Tentative Order is to improve water quality in local waterways and the San Francisco Bay, it imposes numerous new requirements that are not feasible for the City to implement from a technical and/or cost perspective within the five-

year permit term. Hence, staff have presented oral comments at two Water Board hearings and submitted detailed written comments to the Water Board to request a significantly revised Tentative Order that contains feasible and achievable mandates to enable meaningful progress toward protecting and improving water quality in Oakland (see **Attachment B** – City of Oakland Written Comments on the Tentative Order of the Municipal Regional Stormwater NPDES Permit, No. CAS61208, and **Attachment C** – City of Oakland and City of San Jose Joint Comment Letter on the Tentative Order of the Municipal Regional Stormwater NPDES Permit).

### *MRP 3.0 Trash Reduction Requirements*

If adopted, the proposed trash provision in MRP 3.0 would phase out compliance credits constituting 35 percent of the City's trash reduction credit, which includes the 10 percent source control credit (i.e., single-use plastic bag and polystyrene bans), the 10 percent creek and shoreline cleanup credit, and the 15 percent Direct Trash Discharge Control Program credit, while still requiring the City to achieve 100 percent trash load reduction in waterways by 2025. This would result in a need to significantly shift the City's strategy and dedicated resources for achieving compliance from a community-engagement and neighborhood benefit-oriented approach to one that relies primarily on engineered (structural) storm-control methods (i.e., full trash capture devices). These types of devices installed in storm drain lines and inlets do reduce trash in waterways but do not result in cleaner streets and neighborhoods. Depending on location, they also add a significant maintenance burden as they need to be cleaned once to several times per year.

Unlike full trash capture devices, the aforementioned trash management programs have numerous co-benefits, such as addressing blight in disadvantaged communities and deterring future illegal dumping. For example, through its Direct Trash Discharge Control Program, the City prioritizes and devotes additional resources to address illegal dumping and discharges associated with encampments within 500-feet of a waterway. Also, the creek cleanups and Direct Trash Discharge Control Program offer an opportunity to educate and engage residents in a way that can create long-lasting support and stewardship for local watersheds. Volunteer creek cleanups are instrumental in helping improve the health of the waterways as the City addresses our unhoused community living in those areas. Finally, source control actions adopted in the City and Alameda County address single-use products that do not break down in the environment and have significantly decreased the prevalence of these items in our storm drain systems and waterways. The City has requested that percent reduction credits and offsets be retained in MRP 3.0 at the current levels. The benefits to our waterways from trash removal from creeks and increased community awareness and engagement demonstrate the need to retain these credits and offsets.



The following **Table 2** summarizes how Trash Load Reduction Action categories and credits would change under MRP 3.0 (shaded areas show MRP 3.0).

**Table 2: MRP 3.0 Trash Reduction Credit Changes**

Trash Load Reduction Action	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26
1) Full Trash Capture Systems	11.6%	11.6%	11.6%	11.6%	*11.6%	*11.6%
2) Creek & Shoreline Cleanups	10.0%	10.0%	10.0%	10.0%	10.0%	0%
3) Source Control Actions	10.0%	10.0%	0%	0%	0%	0%
4) Direct Trash Discharge Control Program	15.0%	15.0%	15.0%	15.0%	15.0%	0%
5) Other Control Measures	56.8%	56.8%	56.8%	56.8%	*56.8%	*56.8%
Total*	>100%	>100%	93.4%	93.4%	93.4%	68.4%
Compliance Requirement	-	-	90%	90%	100%	100%
Trash Credits Needed	-	-	-	-	6.6%	31.6%

*\* For the purposes of showing the additional trash reduction credits needed under MRP 3.0, the total percentages achieved do not show increases in compliance through Full Trash Capture Systems and Other Control Measures; however, these actions will need to comprise a greater percentage of the compliance strategy to bridge the 100% compliance requirement gap.*

## **FISCAL IMPACT**

No fiscal impacts are associated with this informational report. To achieve compliance with the trash reduction requirements in MRP 3.0 described herein, however, the City will need not only to continue our existing trash reduction efforts (e.g., volunteer cleanups, illegal dumping abatement) but will also need to install up to 4,000 small full trash capture devices throughout the City in high and very-high trash generating areas. This could cost up to \$7 million in capital costs, with an annual maintenance cost of up to \$1.2 million.

## **PUBLIC OUTREACH / INTEREST**

While this item did not require any additional public outreach other than the necessary posting on the City's website, many of the activities and programs of which this memo is reporting include a public outreach component to educate citizens on litter and illegal dumping with the goal of encouraging and fostering personal responsibility for proper disposal of unwanted items through enhancement of civic pride; re-emphasizing the laws and consequences for illegally dumping; connecting residents and businesses with resources and support to assist them with finding the proper disposal options available to them. This includes, but is not limited to the education and outreach campaign Oaktown PROUD, the Adopt-a-Spot program, which fosters community engagement to clean, green, and beautify public spaces, and the Bulky Block parties.

In addition, the City will continue to promote green stormwater infrastructure through the City's website to build public support for the implementation of GSI in the City, where feasible, and in

communities most impacted by racial disparities where the addition of trees and plants in the City's rights of way have the potential to enhance health, safety, and aesthetic appeal.

### **COORDINATION**

The Office of the City Attorney, the Budget Bureau, and the City Administrator's Office were consulted for the preparation of this report.

### **SUSTAINABLE OPPORTUNITIES**

***Economic:*** Although this informational report has no direct economic impacts, the continued efforts to reduce trash and litter will improve the physical appearance of the City of Oakland, which helps attract and retain businesses and promotes civic pride.

***Environmental:*** Although this informational report has no direct environmental impacts, the continued efforts to reduce trash and litter entering the storm drain systems improve the health of Oakland's creeks and waterways, improves water quality, protects native flora and fauna, and prevents pollutants from entering San Francisco Bay.

***Race & Equity:*** Although the informational report has no direct race and equity impacts, implementation of the trash reduction programs described in this report results in cleaner, healthier, and safer communities throughout the city. Frontline and disadvantaged communities are disproportionately affected by litter and debris. The trash reduction programs implemented to comply with the MRP occur primarily in those communities and can help alleviate some of the impacts of environmental injustice and racial disparities. In addition, MRP 3.0 will increase the amount of green stormwater infrastructure (GSI) installed through private development and public capital improvement program (CIP) projects that help to green and beautify communities. The City's CIP project ranking system is heavily weighted toward racial equity to ensure that GSI projects and their multiple benefits are built in Oakland's communities most impacted by racial disparities.

**ACTION REQUESTED OF THE CITY COUNCIL**

Staff recommends that the City Council receive an informational report on the status of the City's compliance with the Municipal Regional Stormwater Permit (MRP) trash reduction requirements and anticipated changes to those requirements in the upcoming reissuance of the MRP.

For questions regarding this report, please contact Kristin Hathaway, Watershed and Stormwater Division Manager, at (510) 238-7571.

Respectfully submitted,



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Attachments (3):

- A: Baseline Trash Generation and Full Trash Capture Systems Map
- B: City of Oakland Written Comments on the Tentative Order of the Municipal Regional Stormwater NPDES Permit, No. CAS61208
- C: City of Oakland and City of San Jose Joint Comment Letter on the Tentative Order of the Municipal Regional Stormwater NPDES Permit

